

**Environmental Assessment DOI-BLM-WY-070-EA13-156**

**Lease Renewals**

West Timber Draw #02170  
Adami Ranch LLC/Cat Creek  
Ranch LLC  
Lease #4907642

North Trabing Stock Rest  
#02295 and Cotton #00754  
Cato Solider Creek Ranch LLC  
Lease # 4907158

Upper Grub #12152  
H & H Livestock  
Lease # 4907243

Poison Creek #12195  
EK Ranch LLC  
Lease # 4907318

Steel Creek#12131  
First Bank of Wyoming  
Lease #4907218

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**Wyoming High Plains District - Buffalo Field Office**



# Table of Contents

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND .....	1
1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION.....	2
1.3 SCOPING AND ISSUES .....	3
<b>2.0 PROPOSED ACTION AND ALTERNATIVES .....</b>	<b>3</b>
2.1 ALTERNATIVE I – PROPOSED ACTION/NO ACTION – RENEWAL OF LEASES WITHOUT MODIFICATION .....	3
2.2 ALTERNATIVE II – NO GRAZING ALTERNATIVE.....	5
2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL .....	5
2.3.1 <i>Sage Grouse Alternative</i> .....	5
2.4 RELATIONSHIP TO STATUTES, REGULATIONS, PLANS, OR OTHER ENVIRONMENTAL ANALYSES.....	5
<b>3.0 AFFECTED ENVIRONMENT.....</b>	<b>6</b>
3.1 INTRODUCTION.....	6
3.2 LIVESTOCK GRAZING .....	7
3.3 SOILS.....	8
3.4 VEGETATION .....	9
3.5 NOXIOUS WEEDS AND INVASIVE NON NATIVE PLANT SPECIES .....	9
3.6 WATER RESOURCES.....	10
3.7 WILDLIFE.....	10
3.8 CULTURAL AND HISTORIC VALUES .....	12
3.9 SOCIOECONOMICS.....	13
<b>4.0 ENVIRONMENTAL EFFECTS.....</b>	<b>13</b>
4.1 DIRECT AND INDIRECT EFFECTS .....	13
4.1.1 <i>Livestock Grazing</i> .....	13
4.1.2 <i>Soils</i> .....	14
4.1.3 <i>Vegetation</i> .....	15
4.1.4 <i>Noxious Weeds and Invasive Non Native Plant Species</i> .....	15
4.1.5 <i>Water Resources</i> .....	16
4.1.6 <i>Wildlife</i> .....	16
4.1.7 <i>Cultural and Historic Values</i> .....	19
4.1.8 <i>Socioeconomics</i> .....	20
4.2 CUMULATIVE EFFECTS.....	20
4.4 MITIGATION/RESIDUAL IMPACTS/MONITORING .....	26
<b>5.0 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED.....</b>	<b>26</b>
<b>6.0 LIST OF PREPARERS .....</b>	<b>27</b>
6.1 LIST OF REVIEWERS.....	27
<b>7.0 WORKS CITED.....</b>	<b>27</b>

The BLM’s multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

## 1.0 INTRODUCTION

### 1.1 Background

The Bureau of Land Management (BLM), Buffalo Field Office proposes to renew 10 year grazing leases for 6 allotments: North Trabing Stock Rest (#02295), Cotton (#00754), Upper Grub (#12152), Poison Creek (#12195), Steel Creek (#12131), and West Timber Draw (#02170). Pursuant to the Federal Land Policy and Management Act (FLPMA) Sec. 402 (c) (3) the holder of the expiring lease shall be given first priority for receipt of the new lease where lands are allocated as available for livestock grazing through land use plans and the lessee is in compliance with the rules and regulations and the terms and conditions of their current lease.

The allotments are in close proximity of one another in Central Johnson County, Wyoming, and 14-26 miles south of the town of Buffalo, Wyoming. Elevations range from 4,156 feet to 8,129 feet in the higher elevation allotments (Poison Creek and Steel Creek). The allotments encompass approximately 20,424 acres of which approximately 23% are public lands, 4% is state land, and 73 % is private land. The grazing leases include a total of 4715 federal acres and 514 animal unit months (AUMs) of forage. Table 2 shows the current grazing use authorized on BLM lands for each allotment. BLM is analyzing these allotments and their associated grazing leases on a watershed scale in order to evaluate the effects of the proposed action on the wider environment and to better capture cumulative impacts. The lands are on the map in Attachment 1. The public lands (BLM) associated with each lase are as follow:

- **North Trabing Stock Rest Allotment (#02295):** T48N R81W Sec. 24 S $\frac{1}{2}$ ; Sec. 25 N $\frac{1}{2}$ NE $\frac{1}{4}$  , NW $\frac{1}{4}$
- **Cotton Allotment (#00754):** T48N R80W Sec. 21 SE $\frac{1}{4}$ NW $\frac{1}{4}$
- **Upper Grub Allotment (#12152):** T49N R79W Sec. 4 SW $\frac{1}{4}$ NW $\frac{1}{4}$  , NW $\frac{1}{4}$ SW $\frac{1}{4}$  , S $\frac{1}{2}$ S $\frac{1}{2}$ ; Sec. 5 S $\frac{1}{2}$  ;Sec. 6 NE $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ ; Sec. 7 NE $\frac{1}{4}$ NE $\frac{1}{4}$ ; Sec. 8 NE $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$ ; Sec. 9 N $\frac{1}{2}$  , N $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$
- **Poison Creek Allotment (#12195):** T47N R83W Sec. 4 Lot 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$ , SW $\frac{1}{4}$ ;Sec. 5 Lot 1, 4, SE $\frac{1}{4}$ NE $\frac{1}{4}$ , W $\frac{1}{2}$ SW $\frac{1}{4}$ , E $\frac{1}{2}$ SE $\frac{1}{4}$ ; Sec. 6 Lot 2, 4, 5, 6, SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ ; Sec. 8 NE $\frac{1}{4}$ NE $\frac{1}{4}$ ; Sec. 9 SW $\frac{1}{4}$ NE $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$   
  
**T48N R83W Sec. 31 SW $\frac{1}{4}$  NE $\frac{1}{4}$**
- **Steel Creek Allotment (#12131):** T46N R83W Sec. 10 SE $\frac{1}{4}$ SW $\frac{1}{4}$ ; Sec. 15 E $\frac{1}{2}$ W $\frac{1}{2}$
- **West Timber Draw Allotment (#02170):** T49N R79W Sec. 20 W $\frac{1}{2}$ SW $\frac{1}{4}$ ; Sec. 21 N $\frac{1}{2}$ ; Sec. 26 NW $\frac{1}{4}$ SW $\frac{1}{4}$ ; Sec. 27 SW $\frac{1}{4}$ SW $\frac{1}{4}$ ; Sec. 29 S $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$

This environmental assessment (EA), WY-070-EA13-156 documents the analysis conducted to determine what impacts the proposed action will have on the environment. The current grazing lessees own the base property associated with their respective allotments. Each of these parties currently holds the grazing authorization for the associated allotment. Lease #4907158 and

#4907243 was last renewed under authority of section 325, public law 108-88 (Appropriations Act) on March 1st, 2012 and will expire on February 28th, 2021. Lease #4907318 was last renewed under authority of section 325, public law 108-88 (Appropriations Act) on January 1st, 2011 and will expire on December 31st, 2013. Lease #4907218 was last transferred under authority of section 325, public law 108-88 (Appropriations Act) on March 1st, 2013 and will expire on February 28th, 2023. Lease #4907642 was last renewed under authority of section 325, public law 108-88 (Appropriations Act) on January 1st, 2010 and will expire on December 31st, 2019. The grazing lessees applied for renewal of the grazing leases authorizing grazing on their respective allotments. Per 43 CFR 4110, the grazing lessees have preference in retaining the grazing privileges attached to each property. Because the leases were last renewed under the appropriations act, in order to adequately complete the process of these leases a new EA will be written. Upon affirmative final decision of this EA's proposed action a new 10 year term grazing lease will be issued to the lessee.

Below Table 1 shows the grazing leases that are leased to the current grazing lessee whom holds a private lands grazing lease of the base property attached to each allotment.

**Table 1- Base Property Leases**

<b>Grazing Lease #</b>	<b>BLM Grazing Lessee</b>	<b>Base Property Owner</b>
4907642	Adami Ranch LLC. Cat Creek Land LLC.	Manuella F. Nicholas and Kay Rene Statfeld
4907243	H&H Livestock	Fred A. Hepp Trust
4907318	EK Ranch LLC	Lester Limited Partnership

A Buffalo Resource Management Plan (RMP) amendment adopted the *Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming* (1997) (S&Gs). A formal assessment of the S&Gs has not yet been conducted for the Steel Creek and Cotton allotments. Although no assessments are complete, monitoring data and field visits on the allotment would likely support that the allotments are meeting the S&Gs for healthy rangelands in Wyoming. In 1998 the BFO developed a schedule for evaluating S&Gs. The allotments on this list are all in the "I" and "M" categories, which are highest priority for management and evaluation as described in the WY S&Gs Implementation Plan. Active management of category "C" isolated public lands is at a public cost and management effort largely beyond the scope of generating public benefit; see generally, *Ted Lapis v. U.S.*, 178 IBLA 62 (2009).

Formal S&Gs assessments are complete on the allotments: North Trabing Stock Rest (#02295), Upper Grub (#12152), Poison Creek (#12195), Steel Creek (#12131), and West Timber Draw (#02170). The assessments found that the allotments are meeting all the applicable S&Gs. BLM distributed the report to all interested persons, and it is available from the Buffalo Field Office.

## **1.2 Purpose and Need for the Proposed Action**

The Buffalo RMP allocated lands as available for domestic livestock grazing during the land use planning process. The purpose of the proposed action is to promote healthy sustainable rangeland ecosystems as well as the efficient and effective administration of grazing on public rangelands specifically within the following allotments: North Trabing Stock Rest (#02295), Cotton

(#00754), Upper Grub (#12152), Poison Creek (#12195), Steel Creek (#12131), and West Timber Draw (#02170).

The need for the proposal is to respond to the grazing lease renewal applications under the BLM mandate under the Taylor Grazing Act, as amended (43 U.S.C. 315 through 315r) and FLPMA (43 U.S.C. § 1701 et seq.) to provide grazing opportunities for domestic livestock grazing on public lands managed by the BLM, where consistent through land use planning.

Decision to be Made: The BLM will decide whether or not to issue 10 year term grazing leases with no change in terms and conditions for these leases; #4907318, #4907218, #4907243, #4907158, #4907642, and how to balance the proposed action with multiple public uses.

### **1.3 Scoping and Issues**

The BLM conducts its decision-making in accordance with the requirements of the Council on Environmental Quality (CEQ) regulations implementing the NEPA, the Department of Interior (DOI), and BLM policies and procedures implementing NEPA. NEPA and the associated regulatory and policy framework require federal agencies use the scoping process in their decision-making.

This EA received internal scoping, from various resources specialist of an interdisciplinary (ID) in the BLM Buffalo Field Office. The identified issues are and were incorporated in Sections 3 and 4 of this EA:

- How would the proposed action affect current livestock grazing management?
- How would the proposed action impact riparian areas/drainages?
- How would the proposed action impact invasive species?
- How would the proposed action impact sensitive soils?
- Would and how would the proposed action affect any special status species, particularly Greater Sage-Grouse (candidate species)?
- How would the proposal impact cultural resources or lands with wilderness characteristics?
- How can grazing impact native vegetation?
- Rangeland health hasn't been completed
- There is a need for the lessee to have this grazing lease renewed

This EA was sent to interested parties of record and is posted on the Buffalo Field Office (BFO) website to solicit public and cooperating agency comments over a 30-day period. The BFO uses received comments to assess whether the EA covers the issues raised and adequately addresses their significance. The BFO's response consists of either addressing public comments in the decision record or results in the preparation of a new EA.

## **2.0 PROPOSED ACTION AND ALTERNATIVES**

### **2.1 Alternative I – Proposed Action/No Action – Renewal of Leases without Modification**

The BLM proposes to maintain and improve land health and enhance habitat conditions on public lands in the BFO stewardship area by maintaining and/or enhancing upland grassland

health and sagebrush habitats (species composition and structure) and maintaining riparian, wetland, and aquatic habitats through existing livestock grazing management.

Since no changes are proposed, the Proposed Action Alternative and the No Action Alternative are the same (As Per Washington Office Instruction Memorandum (IM) 2000-022, Change 1 (1999)). The proposed action and the no action alternative are to offer a new 10 year term grazing lease for the following allotments: North Trabing Stock Rest (#02295), Cotton (#00754), Upper Grub (#12152), Poison Creek (#12195), Steel Creek (#12131), and West Timber Draw (#02170) under the same terms and conditions of the existing leases. Alternative A allows the BLM to offer or withhold any or all of the proposed allotments in Table 2, below, singularly or in any combination, in the most efficient, effective legal means. Decisions will be written separately for each grazing lease. For ease in administration of allotments with base leases, under this Alternative the leases will be approved for 10 years no matter the term of the base lease. If the base lease is canceled, the lease will be transferred back to the base property owner or the new base lessee for the remaining term of the BLM lease. Table 2 shows current authorized use (mandatory terms and conditions) for each lessee.

**Table 2 List of Leases and the corresponding allotments associated with the lease**

Authorization Number	Allotment Number	Allotment Name	Public Acres	% Public Land	Livestock Number	Livestock Kind	Season of Use	AUMs	Type of Use
#4907318	12195	Poison Creek	1315	53	70	Cattle	6/15 to 10/13	148	Active
#4907218	12131	Steel Creek	200	4	200	Cattle	6/20 to 9/04	20	Active
#4907243	12152	Upper Grub	1640	16	85	Cattle	3/01 to 2/28	163	Active
#4907158	02295	North Trabing	560	100	78	Cattle	11/01 to 11/30	78	Active
	00754	Cotton	40	4	9	Cattle	3/01 to 2/28	4	Custodial
#4907642	02170	West Timber Draw	960	15	56	Cattle	3/01 to 2/28	101	Active
<b>Total</b>			<b>4715</b>				<b>Total</b>	<b>514</b>	

The following terms will be lease, “Other Terms and Conditions”. These make the lease to conform to the goals, objectives, and decision of the Buffalo RMP Records of Decision (RODs).

- This authorization is subject to cancellation, suspension, or modification for any violation of the regulations at 43 CFR Part 4100, or of the terms and conditions of the authorization
- The terms and conditions of your lease may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180
- Lessee agrees to allow authorized officers of the USDI-BLM to enter the leased lands at any time for the purpose of inspection
- Please notify BLM if number/kind of livestock or dates of use change

The following term will be placed as an “Other Term and Conditions” on the leases that have base property leases on them (#4907642, #4907243, #4907318). This will ensure that if a base property lease is canceled or transferred to a different base lessee, that it will be transferred back to the base property owner or the new base property lessee for the remaining time of the 10 year term BLM grazing lease.

- This lease will be canceled when notification of cancellation of the base property lease occurs or the BLM is notified that the base lease is not renewed. Once canceled the BLM lease will be transferred back to the base property owner or a new base property lessee for the remaining time of the 10 year term BLM grazing lease.

The proposal will issue new 10-year term grazing leases to the grazing lease applicant. The applicants are currently in good standing with the BLM and meet all qualifications for obtaining a grazing lease per 43 CFR 4110.1 and 4110.2. In accordance with Title 43 CFR 4130.2(a), “Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the [BLM] that are designated as available for livestock grazing through land use plans.” During the 10 years or following the end of the permit, the permit may be modified if information indicates changes in management are needed to ensure the allotments are meeting or progressing towards achieving the S&Gs.

The applicants are not proposing any projects or other surface disturbing activities in connection to these lease issuances. The BLM will analyze any future range improvement projects associated with these allotments under separate, site-specific analysis.

## **2.2 Alternative II – No Grazing Alternative**

Under this alternative the BLM will not permit livestock grazing on the North Trabing Stock Rest (#02295), Cotton (#00754), Upper Grub (#12152), Poison Creek (#12195), Steel Creek (#12131), and West Timber Draw (#02170). Alternative B allows the BLM to emplace a no grazing provision on any or all of the proposed allotments in Table 2, above, singularly or in any combination, in the most efficient, effective legal means. The existing grazing leases will be cancelled in accordance with 43 CFR parts 4100 and 1600 to eliminate grazing on the allotments.

## **2.3 Alternatives Considered but not Analyzed in Detail**

### **2.3.1 Greater Sage-Grouse (GSG) Alternative.**

BLM IM WY-2012-019 (2012) requires the BLM to address a reasonable range of alternatives in livestock grazing EAs in order to assess the impacts of livestock grazing on GSG habitat and land health. The IM also stipulates that a deferred grazing system alternative should be considered if the size of the allotment warrants it. The size and continuity of the public lands in these allotments make a BLM-administered deferred or rest-rotation grazing system an unreasonable alternative in these specific cases. Although the Cotton, Upper Grub, and West Timber Draw allotments are in GSG Core area, the management opportunity does not warrant a deferred grazing system. In addition, there is little to no GSG habitat present in the North Trabing, Poison Creek, and Steel Creek allotments and they fall outside of Key GSG Habitat.

## **2.4 Relationship to Statutes, Regulations, Plans, or Other Environmental Analyses**

This EA fulfills the 1969 National Environmental Policy Act (NEPA) requirement for site-specific analysis. The proposal and its alternatives are in accordance with the following laws and/or regulations, other plans, and are consistent with federal, state, and local laws, regulations:

- National Environmental Policy Act (NEPA) of 1969 (Pub. L 91-190; 42 U.S.C. 4321 et seq.)
- Taylor Grazing Act of June 28, 1934, as amended (43 U.S.C. 315 through 315r)
- The Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901, et seq.)
- FLPMA of 1976, as amended (Pub. L. 94-0579); 90 Stat.2743; 43 U.S.C. 1701 et seq.)

- 43 CFR § 4100 Grazing Administration-Exclusive of Alaska
- Grazing Regulations as codified in 43 CFR § 4100 as amended in 2005
- Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.)
- Clean Water Act Section 303d
- National Historic Preservation Act of 1966 Section 106
- Sikes Act of 1969 (Habitat Improvement on Public Land)
- Fish and Wildlife Improvement Act of 1978
- Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds
- Interagency Cooperation Regulations (50 CFR 402)
- BLM Instruction Memorandum No. WY-2010-012, Greater Sage-Grouse Habitat Management Policy on Wyoming BLM Administered Public Lands including the Federal Mineral Estate (Maintained into the Buffalo RMP)
- DOI Secretarial Order No.3310—Protecting Wilderness Characteristics on Lands Managed by the BLM, Dec. 2010
- Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for the Public Lands Administered by the BLM in the State of Wyoming, December 2004

The proposed action and its alternatives conform to the Record of Decision for the Buffalo RMP, 1985, the 2001 amendment, and the Powder River Basin Oil & Gas Project Final Environmental Impact Statement and Resource Management Plan Amendment (PRB FEIS), 2003. The action is consistent with the land use plan terms and conditions; 43 CFR 1610.5-3(a). The Buffalo RMP EIS analyzed the impacts of grazing.

### **3.0 AFFECTED ENVIRONMENT**

#### **3.1 Introduction**

General access to the allotments is via county, state and federal roads including; Interstate 90, Schoonover, Greub, and Dry Creek Roads. The North Trabing and Upper Grub Allotments are the only allotments with public access. The allotments are in the PRB Level IV eco region which consists of unglaciated, irregular and dissected plains. Perennial streams in the area are generally of montane origin with sand, gravel, and cobble substrates. Ephemeral or intermittent streams in the area typically have sandy or silty substrates with many impoundments. The precipitation zone of the area is 10-14" Northern Plains (NP) except for portions of the Poison Creek allotment which is in the 15-19" Northern Plains (NP). Mean temperatures in January are 0°F (low) and 36°F (high) and in July they are 52°F (low) and 88°F (high). (Chapman, et al., 2004).

In addition to the grazing leases, other uses are authorized on the public lands in the allotments; Section 4.2 discusses this further. Table 2 shows the additional authorized rangeland improvement projects on public lands within the allotments pertaining to this EA. Maintenance of these projects are of the grazing lessee's responsibility. Livestock grazing, wildlife use, and oil and gas production are common land uses in the area. Recreational use, primarily big game hunting may also occur on the allotments. The public lands in these allotments are clearly lacking in wilderness characteristics due to their small size (less than 5,000 acres).



**Table 3-Other Authorized uses on public lands**

<b>Allotment Name</b>	<b>Allotment Number</b>	<b>Project Name(Project Number)</b>
North Trabing	02295	Trabing Reservoir Fence(#965254)
North Trabing	02295	Smith Brothers Fence(#960267)
North Trabing	02295	SDW Reservoir(#960324)
North Trabing	02295	Smith SDW Fence(#960431)
North Trabing	02295	Afred SDW Fence(#960592)
North Trabing	02295	Smith Brothers SDW Fence(#960578)
Poison Creek	12195	Lester Fence(#964088)
Poison Creek	12195	Lester Fence(#960245)
Poison Creek	12195	Purdy DIV Fence 2(#964451)
Upper Grub	12152	Marton Fence(#961615)
West Timber Draw	02170	Indian Creek Fence(#495689)

**The following critical elements are not present and will not be further analyzed:**

Air Quality	Hazardous or Solid Wastes	Human Health and Safety
Prime or Unique Farmlands	Wild and Scenic Rivers	Visual Resource Management
Flood Plains	Environmental Justice	Wilderness Characteristics
Native American Religious Concerns	Mineral Resources	
Areas of Critical Environmental Concern	Water Quality / Drinking Water	

### **3.2 Livestock Grazing**

In 1985, BLM established three categories for allotments to identify areas where management was potentially needed, as well as to prioritize workloads and the use of range improvement funds. The categories classify allotments as Improve Existing Resource Conditions (I), Maintain Existing Resource Conditions (M), or Custodial Management (C) (USDI 2008). The Cotton, Upper Grub, West Timber Draw, and Steel Creek allotments are category “C” allotments, meaning their management is minimal in nature, due to the small amount of public land within the allotments. The BLM’s rationale for this classification is that there are no identified resource problems, and the size and continuity of the public land is not conducive to more intensive management by the BLM. The allotments have low potential for yielding a positive return on public investment in management or rangeland project development. The North Trabing and Poison Creek Allotments are M category allotments. BLM’s management goal is to maintain existing conditions and management in the allotment. M category allotments have a higher level of management opportunity for the BLM than C allotments.

The allotments have been grazed for numerous years. Current livestock grazing season within all allotments is shown in Table 2. The total amount of AUMs available for grazing on public lands within the allotments is 514 AUMs. The allotments consist primarily of private lands. Authorized Range improvements include those shown in Table 3 of this document. Table 3 describes the current breakdown of ownership and AUMs.

Table 4-Ownership and AUMs

Allotment #	Allotment Name	Surface Ownership	Acres	Percent	AUMs	% AUMs
00754	Cotton	BLM	40	2.1%	4	2.1%
		Private	1,551	81.3%	155	81.3%
		State	316	16.6%	121	16.6%
		Total	1,907		191	
02295	North Trabing	BLM	560	100%	78	100%
		Private	0	0%	0	0%
		State	0	0%	0	0%
		Total	560		78	
12195	Poison Creek	BLM	1,315	55%	148	55%
		Private	1,075	45%	121	45%
		State	0	0%	0	0%
		Total	2,390		269	
12131	Steel Creek	BLM	200	7.9%	20	7.9%
		Private	1,851	73.6%	185	73.6%
		State	465	18.5%	46.5	18.5%
		Total	2,516		252	
12152	Upper Grub	BLM	1,640	21.6%	164	21.6%
		Private	5,966	78.4%	597	78.4%
		State	0	0%	0	0%
		Total	7,606		761	
02170	West Timber Draw	BLM	960	17.6%	100	17.6%
		Private	4,486	82.4%	467	82.4%
		State	0	0%	0	0%
		Total	5,446		567	
		Total (all allotments)	20,425		2,117	
		BLM (all allotments)	4,715	23.1%	514	23.1%
		Private (all allotments)	14,929	73.1%	1,525	73.1%
		State (all allotments)	781	3.8%	78	3.8%

\*Note: This data was compiled using ARCGIS data and may not represent exact acres owned by the grazing lessees, the private and state AUMs are estimates based on acres.

### 3.3 Soils

Ardisols and Entisols are the most common soils in the allotments. Ardisols are mixed alluvium derived from andesite, limestone, and quartzite. Ardisols are typically well drained with a low runoff classification and an Ardic moisture regime. Entisols are derived from sandy eolian material and have an excessively drained drainage class. They have a slight hazard of erosion and common land uses are for rangelands.

The principal soils (Top 5) found on public lands consist of the following soil map units:

709-Theedle-Shingle loams, 3 to 30 percent slopes

708-Theedle-Kishona-Shingle loams, 3 to 30 percent slopes

990-Rock outcrop-Cloud Peak association, 10 to 70 percent slopes

989-Cloud Peak Gravelly Silt Loam, 5 to 45 Percent Slopes

SOE-Simmont-Rock outcrop complex, steep

A complete description of these soils can be found in the, (Soil Survey Geographic (SSURGO) database for Johnson County Area, Wyoming, Southern Part , 2011) (Soil Survey Geographic (SSURGO) database for Johnson County Area, Wyoming, Northern Part, 2011), published by the US Department of Agriculture Natural Resources Conservation Service (NRCS).

### 3.4 Vegetation

The plant communities found on public lands within the allotments are considered to be in the 10- to 14-inch precipitation zone Northern Plains (NP) Major Land Resource Area (MLRA). Some portions of the Poison Creek and Steel Creek Allotments are in the 15- to 19-inch precipitation zone Northern Plains (NP) MLRA, but vegetation type is similar throughout all the allotments. The principle range site or ecological site is Loamy. Other range sites or ecological sites that can be found within the allotment include; Clayey, Lowland, Sandy, Shallow Clayey, and Shallow Loamy. The primary vegetative type through the various allotments is Wyoming big sagebrush type. Vegetation found on these sites include Wyoming big sagebrush, silver sagebrush, winterfat, rabbitbrush, green needle grass, needle-and-threadgrass, western wheatgrass, bluebunch wheatgrass, prairie Junegrass, Sandberg bluegrass, bluegrama, little bluestem, asters, paintbrushes, clovers, biscuitroot, western yarrow, fringed sagewort, Hoods phlox, buckwheat's, and numerous other grasses and forbs. Most of these sites' growth occurs between May and June. According to the ecological site description (2011), as this site deteriorates species such as blue grama and big sagebrush increase and cool-season grasses such as needlegrass, needle-and-threadgrass, and rhizomatous wheatgrasses will decrease in frequency and production. Annuals bromes will commonly increase with improper management as well. Vegetation types such as mixed grass prairie, ponderosa pine intact, subalpine meadow, and sub dominated riparian are also present. A more complete description of each ecological site can be found on the NRCS's Ecological Site Description webpage.

Currently 514 AUMs are authorized within the various allotments. The AUMs were calculated using the Land Planning and Classification Report of the Public Domain Lands in the Powder and Missouri River Basin (U.S. Department Interior- Bureau of Land Management, 1956). These AUMs were calculated using light to moderate stocking rates.

### 3.5 Noxious Weeds and Invasive Non Native Plant Species

Invasive species and noxious weeds exist in the affected environment. The primary species in the area is downy brome (*Bromus tectorum*) and to a lesser extent, Japanese brome (*Bromus Japonicus*). Downy brome, also referred to as cheatgrass, is present throughout the area but primarily exists along two-track trails and other areas of disturbance. Downy brome is an invasive nonnative annual grass that can degrade native plant communities. At this point in time downy brome is not a major component of the native plant communities in the allotments. If discovered in the future, noxious weeds within the allotments that pose a risk to the native vegetation on public lands will be aggressively treated using an integrated pest management (IPM) approach.

### **3.6 Water Resources**

There are 5 principle drainages in the area. Crazy Women Creek runs through the Upper Grub and Cotton allotments, Poison Creek and Middle Fork of Crazy Women Creek runs through the Poison Creek allotment, and Steel Creek runs through the Steel Creek allotment. Approximately 0.1 mile of Crazy Woman Creek is on BLM land in the Cotton allotment, while 0 miles are on BLM land in the Upper Grub allotment. Approximately 1 mile of Poison Creek and 0.3 mile of Middle Fork Crazy Women Creek are on BLM land in the Poison Creek allotment. About 0.2 mile of Steel Creek is on BLM land in the Steel Creek allotment. All other drainages on public land within the allotments are ephemeral. The area is part of the Crazy Woman drainage system. The only other water source on public lands is the reservoir in the North Trabing allotment.

### **3.7 Wildlife**

#### **3.7.1 Migratory Birds, Special Status Species, Threatened and Endangered Species, and Small Mammals**

The BLM conducted wildlife evaluations to assess the occurrence of selected wildlife species and their habitats, as well as to evaluate the anticipated effects associated with issuing these grazing leases on the Cotton, Upper Grub, West Timber Draw, Steel Creek, North Trabing and Poison Creek. The evaluations included selected individual species or species groupings that are ecologically, economically, or socially important.

Evaluation methods included comparison of aerial imagery (1994 to 2009) and review of wildlife geospatial datasets (available at BFO). Datasets included occurrence information for big game, raptors, bald eagles, Greater Sage-Grouse (GSG), sharp-tailed grouse, mountain plover, black-tailed prairie dogs, and sagebrush in the project area.

Wildlife habitats occurring on the allotments are results of a complex history of natural and man-caused influences. Important natural influences included short- and long-term climate variation, infrequent wildfire, and ungulate grazing; especially by bison (Baker, 2006),(Mack & Thompson, 1982). From about 1880 to 1910, the removal of native bison, and their subsequent replacement with “vast numbers” of cattle and excessive numbers of sheep, greatly influenced the PRB, including these four allotments (Cassity, 2007);(Patterson, 1952). The combined impacts of cattle and sheep overstocking and climate may have initiated the ongoing epicycle of gully erosion that is evident throughout the Basin (Leopold & Miller, 1954). Enactment of the Taylor Grazing Act of 1934 repaired early range degradation and aided the recoveries of reduced wildlife populations (Patterson 1952). Appendices A.1 and A.2 summarize the affected environment relative to selected wildlife.

#### **3.7.2 Candidate Species**

This EA discusses GSG in detail because they are a Candidate Species, currently warranted for listing under the Endangered Species Act (U.S. Fish and Wildlife Service (USFWS), 2010) and are thus of heightened management concern in the BFO. GSG are also a Wyoming BLM sensitive species and a Wyoming Game and Fish Department (WGFD) Species of Greatest Conservation Need (SGCN). GSG habitat is present on BLM lands in the Cotton, Upper Grub, West Timber Draw, Steel Creek, North Trabing and Poison Creek Allotment. Habitat models indicate that BLM lands in all of the allotments have a small amount of high quality winter and

nesting GSG habitat. There are no leks in the West Timber Draw, North Trabling, Steel Creek, Poison Creek, Cotton allotments, but the Upper Grub allotment has two GSG leks (North Grub Draw and South Grub Draw) within the boundary.

As noted in BLM WY-IM-2010-012 (2009), domestic livestock grazing has occurred in and around these allotments and “within the range of [GSG] for over 150 years and is the most common and widespread use of rangelands in the western United States. Livestock grazing practices may affect herbaceous composition, cover, and height and has a potential to impact Wyoming Big Sagebrush habitats. WY BLM has standards and guidelines to ensure proper livestock grazing management on public lands which can help maintain healthy rangeland conditions and provide functional habitat for [GSG]. However, poor livestock grazing practices can have long-term negative impacts on [GSG] habitat by degrading sagebrush, meadow, and riparian communities (Bohne, Rinkes, & Kilpatrick, 2007).”

### 3.7.3 Big Game

Big game species occurring within the EA area include pronghorn, whitetail, and mule deer. Table 5 summarizes WGFD big game seasonal range data for the allotments.

**Table 5. Big Game Seasonal habitat provided in each Allotment**

<i>Species</i>	<b>Cotton</b>	<b>Upper Grub</b>	<b>West Timber Draw</b>	<b>Steel Creek</b>
<i>Whitetail deer</i>	Yearlong	Yearlong	None	None
<i>Mule deer</i>	Yearlong/Winter-Yearlong	Yearlong/Winter-Yearlong	Yearlong	Winter-Yearlong
<i>Pronghorn</i>	Yearlong	Yearlong	Yearlong	Winter-Yearlong
<i>Species</i>	<b>North Trabling</b>		<b>Poison Creek</b>	
<i>Whitetail deer</i>	Yearlong		None	
<i>Mule deer</i>	Yearlong/Winter-Yearlong		Spring-Summer-Fall	
<i>Pronghorn</i>	Yearlong		None	

Yearlong use is when a population makes general use of suitable documented habitat sites in the range on a year-round basis, but animals may leave the area under severe conditions. Winter-yearlong use is when a population or a portion of a population of animals makes general use of the documented suitable habitat sites within this range on a year-round basis, but during the winter months there is a significant influx of additional animals into the area from other seasonal ranges. In spring-summer-fall range a population or portions of a population of animals uses the documented habitats within this range from the end of the previous winter to the onset of persistent winter conditions.

As of the most recent available report, populations of whitetail deer in their respective hunt areas are above WGFD objectives (Wyoming Game and Fish Department(WGFD), 2011b). Populations of mule deer and pronghorns are below their WGFD objective.

### 3.7.4 Raptors (only if crucial nest/site specific needs)

Raptors use all of the Allotments for breeding, foraging, wintering, or migration. Common raptor species frequenting the allotment include: golden eagle, northern harrier, red-tailed, Swainson’s hawks, American kestrel, short-eared, and great-horned owls. Less common species that may use area habitats include: bald eagle, rough-legged hawk, and merlin. Bald eagles occasionally roost

in cottonwoods galleries in nearby riparian areas in the winter and forage in the area. Raptors generally prey on small mammals, reptiles, and fish. Their survival and reproductive success depends, in part, upon the availability and abundance of these food sources.

### **3.8 Cultural, Historic Values, and National Register of Historic Places (NRHP)**

#### **North Trabing Stock Rest:**

The majority of the North Trabing Stock Rest Allotment has not been subject to Class III cultural resource inventory, although the Wyoming Cultural Records Office database revealed that 4 cultural resource assessments related to gravel pits and a road project yielded 2 prehistoric open camps and one dual component site consisting of a prehistoric open camp with a historical cartridge casing. Both sites remain unevaluated for NRHP eligibility. There may be additional unrecorded cultural sites, some of which may be NRHP-eligible, in the allotment.

#### **Cotton:**

The majority of the Cotton Allotment has not been subject to Class III cultural resource inventory, although the Wyoming Cultural Records Office database revealed that one cultural resource assessment related to a coalbed natural gas (CBNG) project yielded one historical site that was determined to be not eligible for inclusion in the NRHP. There may be additional unrecorded cultural sites, some of which may be NRHP-eligible, within the allotment.

#### **Upper Grub:**

Approximately half of the Upper Grub Allotment has been covered by 4 cultural resource assessments associated with unspecified PODs, a highway project, and a mine permit. The allotment contains 6 known cultural resources consisting of 4 prehistoric sites and 2 historical sites only 1 (48JO4091) of which is NRHP-eligible whereas the remaining 5 are not eligible for inclusion in the NRHP. There may be additional unrecorded cultural sites, some of which may be NRHP-eligible, in the allotment.

#### **Poison Creek:**

Only one Class III cultural resource inventory in association with a timber sale occurred in the Poison Creek Allotment and identified 1 prehistoric lithic scatter that remains unevaluated for NRHP eligibility. There may be additional unrecorded cultural sites, some of which may be NRHP-eligible, in the allotment.

#### **Steel Creek:**

Only 1 Class III cultural resource inventory associated with a transmission line was conducted in the Steel Creek Allotment. No cultural resources have been identified to date, however there may be unrecorded cultural sites, some of which may be NRHP-eligible, in the allotment.

#### **West Timber Draw:**

Approximately half of the West Timber Draw Allotment was covered by 6 cultural resource assessments associated with oil and gas and CBNG PODs and a seismic project. The allotment contains 10 known cultural resources consisting of 1 prehistoric site, 6 historical sites, and 3 dual component sites only 1 (48JO3742) of which is NRHP-eligible whereas the remaining 9 are not eligible for inclusion in the NRHP. There may be additional unrecorded cultural sites, some of which may be NRHP-eligible, in the allotment.

### **3.9 Socioeconomics**

Ranching is a strong component of local society and has a historical value, as grazing occurred in the area since the late 1800s. According to the (U.S. Department of Agriculture, 2010) Agricultural Census Publication the value of sale of cattle and calves, Wyoming ranked 24th in the country and 4th for sheep and lambs. The ranking of market value of Ag products sold, cattle and calves sold ranked 1 in the state and 5th for sheep and goats. These statistics show that the ranching industry is a key component in Wyoming agriculture as well as the nation's agriculture, and the sales from the livestock are linked to the commodity value of public rangelands. Public lands are an intricate part of the ranch operation, as it is intermingled with private and state land making it difficult to use one parcel without using the other. The grazing lease helps maintain integrity of the ranch operation and lends to supporting the cultural lifestyle of the lessee.

Public lands contribute to the receipts of the state in which they are located through "Payment In Lieu of Taxes" by the federal government. All 6 of the allotments analyzed in this EA were established according to provision of Section 15 of the Taylor Grazing Act. Receipts from grazing on Section 15 lands are distributed two ways: 50% goes to the federal government for range betterment projects, and 50% is returned to the State government. The grazing fee is \$1.35 per animal unit month (AUM) on public land, \$5.13/AUM on Wyoming State Lands, and an average of \$17.60/AUM on private lands. The grazing leases described in this EA generate approximately \$700 annually, of which 50% goes back to the federal government.

## **4.0 ENVIRONMENTAL EFFECTS**

### **4.1 Direct and Indirect Effects**

#### **4.1.1 Livestock Grazing**

##### Alternative I-Proposed Action/No Action Alternative

The impacts normally associated with livestock grazing are expected to continue upon issuing new leases. These impacts include nutrient cycling, physical damage to vegetation, trailing along fences, trampling and heavier grazing use around salted areas. This alternative would allow for the grazing lessees to continue to grazing on their respective grazing allotments. Livestock would continue using up to 514 public AUMs annually; see Table 2, above.

Rangeland vegetation inventory (U.S. Department Interior- Bureau of Land Management, 1956) data indicates an adequate amount of forage is available to support the proposed number of livestock and for wildlife use and the effects of that use within this allotment. The new grazing lease authorizes the same numbers and kind of livestock and season of use as the expiring or expired lease. This action is not proposing any changes to grazing management. The BLM does not expect the renewal and issuance of the grazing lease to have any effects on range management. Past visit and rangeland health assessments show that the grazing management within the allotments is acceptable.

##### Alternative II-No Grazing Alternative

FLPMA requires the BLM to manage public lands and resources by the principles of multiple use and sustained yield and recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber. FLPMA also requires the BLM—except in cases of emergency—to give two

years' notification when an authorization for domestic livestock grazing is cancelled, in whole or in part, to devote the associated lands to another public purpose, including disposal.

The Buffalo RMP states as a resource management decision that *livestock grazing is allowed on all public lands in the resource area except on about 6,000 acres where it has been determined to be incompatible with other resource uses or values.*

There are no fences or natural barriers separating BLM and non-BLM lands. At this time, fencing out the public lands is not practical or cost effective. If extraordinary circumstances arise, such as the identification of an endangered plant or damageable cultural resource on the site, fencing may be a greater priority, and the BLM will address the matter in a separate analysis. If the public lands are not leased, and subsequently not fenced, any livestock use occurring thereon is unauthorized. Selecting this alternative will affect how the adjacent private and state lands are grazed because the operator must keep livestock off public lands through herding or fencing, or else be in violation of federal grazing regulations. The mixed ownership pattern in the BFO resource area makes herding difficult, in addition to the fact that herding does not ensure that public lands are not grazed. A rider needs to remain with livestock at all times. Because it is not economically feasible for the BLM to fence all federal land parcels, fences will likely be constructed on private land, fragmenting the area and making BLM unable to stipulate wire spacing to facilitate wildlife movement. Most four-strand fences on private land have a top wire of 46-48 inches with 10-12 inch wire spacing and all wires are barbed. In the absence of fences, the BLM must constantly supervise the public lands to assure they are not being grazed.

No adverse resource impacts resulting from livestock grazing have been identified which would warrant cancellation of all grazing on these allotments. The Buffalo RMP allows for adjustment of forage allocation based on an evaluation of monitoring, field observations, or other data as needed. Additionally, changes in grazing practices can be effective in mitigating impacts without a corresponding reduction in forage allocation.

#### **4.1.2 Soils**

##### Alternative I-Proposed Action/No Action Alternative

Grazing can exert both beneficial and detrimental effects on a soil resource. The main effects that livestock grazing has on the soil resource is removal of above ground vegetation and hoof action, potentially leading to increased erosion, increased runoff, reduce infiltration rates and increased bulk density (compaction) (Holechek, Pieper, & Herbel, 2004, p. 379). Most of the compaction and erosion will occur where cattle tend to congregate which may include areas along trails, fence and near watering locations. This compaction leads to lowered rates of water infiltration thus leading to high rates of surface runoff and greater soil erosion.

On a positive standpoint, large quantities of dung and urine are deposited throughout the allotments adding nutrients and organic matter to the soil (McNaughton, 1979). Hoof action can benefit the soil resource by improving nutrient cycling by incorporating mulch into soil surface where it can be broken down more quickly by soil organisms (Holechek, Pieper, & Herbel, 2004, p. 379). Livestock grazing can loosen the soil surface during drying periods, remove excess vegetation that may negatively affect net carbohydrate fixation and increase water transpiration rates, and speed up the development of humus in the soil (Holechek, 1981).



Because no changes in the current management are being implemented under the proposed action/no action alternative, impacts to the soil resource would remain the same and no changes from the current state of the resource are expected.

#### Alternative II-No Grazing Alternative

With the removal of grazing from the allotments, forage would not be removed by livestock. Standing vegetation and litter would increase. The increase in cover may reduce runoff and erosion. With the removal of livestock from the allotment a decrease in compaction and increase infiltration would be anticipated (Pluhar, Knight, & Heitschmidt, 1987).

Nutrient cycle in the allotments would likely change. Cattle can increase soil nutrients by depositing excrement on the soil surface. But with improper management they may decrease nutrients by consuming and permanently removing plants that put nutrients into the soil system.

### **4.1.3 Vegetation**

#### Alternative I-Proposed Action/No Action Alternative

Grazing's effects on vegetation varies greatly depending on factors including but not limited to: resistance to grazing, genetic potential, growth promoting features, grazing intensity, life stage of plant, and environmental constraints (Holechek, Pieper, & Herbel, 2004, pp. 123-142)). Livestock grazing can have both beneficial and detrimental effects on vegetation depending on the various factors described by Holechek. Beneficial impacts may include but not limited to: grow stimulation from grazing ruminants saliva (McNaughton, 1979), trampling of seed into the ground (Holechek, 1981), reducing excess accumulation of standing dead vegetation and mulch that may chemically and physically inhibit new plant growth (Holechek, 1981), and reducing transpiration losses (Holechek, Baker, Boren, & Galt, 2006). Some detrimental impacts livestock grazing may have on vegetation include but are not limited to: changes in species composition in upland areas (Brock & Green, 2003), tillering may be reduced (Belsky, 1986), modifying the growth form of plants by consuming terminal buds thereby promoting lateral branching (Fleischner, 1994), and disruption of ecological succession (Fleischner, 1994).

Under the proposed actions/no action alternative, approximately 514 AUMs will be removed by livestock annually. Most studies showed that with light to moderate stocking rates, rangelands would not be compromised. The AUMs authorized are based on a light to moderate stock rate. Therefore, as long as the total number of permitted AUM's consumed don't exceed the authorized use for the allotments; the impacts associated with renewing the grazing leases should not have an undesirable effect on vegetation.

#### Alternative II-No Grazing Alternative

The no grazing alternative would eliminate the beneficial and detrimental impacts of grazing. It is likely with the removal of grazing that litter would increase, thus increasing fire potential in the allotments. More vegetation would be available for wildlife and ecosystem function. However, Patton, et al. (2007), found that production does not increase with the removal of livestock grazing. Other studies have also found that removal of grazing can lead to an increase in shrub cover, and a decrease in species richness and plant diversity (Manier & Hobbs, 2007).

### **4.1.4 Noxious Weeds and Invasive Non Native Plant Species**

#### Alternative I-Proposed Action/No Action Alternative

Livestock can potentially transport Noxious Weeds and Invasive Non Native Plant Species through their coat and feet as well as in their digestive tract. Livestock may carry these undesirable plants that may already exist on the allotment or from other pastures they may encounter throughout their life. Livestock grazing can increase the presence of noxious weeds by over grazing (DiTomaso, 2000); this is the primary cause of unwanted species invasion (Holechek, Pieper, & Herbel, 2004, p. 508). Since many roads and trails occur throughout the allotments, and recreational opportunities exist in the area, new weed introductions are likely to occur on a regular basis. These infestations are monitored annually by the BLM, county weed and pest agents, and grazing lessee to determine if management changes are needed to control the infestations. Because current and proposed management does not exceed recommended grazing levels and no management concerns occur at this time, it is anticipated that under the proposed action no increases in noxious weeds or invasive non-native plant species will occur.

#### Alternative II-No Grazing Alternative

Removing livestock grazing from the public land can promote growth—and potential overgrowth—of perennial grasses and forbs, thus crowding out or reducing the potential for invasion of noxious and/or invasive species. Yet the overgrowth of vegetation increases the availability of fire fuels, increasing the risk and intensity of wildfire - allowing opportunistic noxious and invasive species to colonize the public lands. Cooperative weed control efforts could discourage overgrowth of vegetation and decrease the fire return interval.

#### **4.1.5 Water Resources**

##### Alternative I-Proposed Action/No Action Alternative

Livestock are attracted to riparian areas by environmental and nutritional factors and may use riparian vegetation disproportionately more than adjacent uplands (Gillen, Krueger, & Miller, 1985), (Howery, Provenza, Banner, & Scott, 1996). This attraction can lead to higher use to the riparian and riparian like areas thus, leading to a decline in streambank stability, a decline in the cover/streambank class with concomitant increase in the uncovered/unstable class, increase in soil erosion (McInnis & McLver, 2001), removal of wood vegetation, soil compaction, and reduced water quality (Parsons, Momont, Delcurto, McInnis , & Porath, 2003). Although uncontrolled livestock grazing can result in watershed destruction in certain areas, controlled grazing is not detrimental to water quality and may increase water quantity (Holechek, 1981). No major degradation problems have been identified under the past and current management of livestock. Therefore, impacts to water resources are expected to remain unchanged with respect to the proposed action/no action alternative.

##### Alternative II-No Grazing Alternative

The removal of grazing would improve/maintain riparian health. Less utilization will occur on riparian plants, thus reducing trampling and hoof shearing along the green line of riparian areas. Total vascular vegetation, shrub, and graminoid canopy cover would increase with the exclusion of livestock (Schulz & Leininger, 1990).

#### **4.1.6 Wildlife**

##### **4.1.6.1 Migratory Birds, Special Status Species, Threatened and Endangered Species, and Small Mammals**

##### Alternative I-Proposed Action/No Action Alternative

*(See Tables A.1 and A.2 in Appendix A)*

The USFWS issued a block clearance for the PRB for the endangered black-footed ferret. Alternative B would have “*no effect*” on black-footed-ferrets. The proposed action will have “*no effect*” on Ute ladies’-tresses orchid because suitable habitat for this species is not present in the allotments.

#### Alternative II-No Grazing Alternative

The U.S. Fish and Wildlife Service issued a block clearance for the PRB for the endangered black-footed ferret. Alternative A would have “*no effect*” on black-footed-ferrets.

If grazing is removed from the allotments, there will be “*no effect*” on Ute ladies’-tresses orchid, because there is no suitable habitat for this species in the allotments. Cancelling grazing may have a negative impact burrowing owls and black-tailed prairie dogs by reducing the number of grazed areas, which provide preferred habitat for these species.

#### **4.1.6.2 Candidate Species**

##### Alternative I-Proposed Action/No Action Alternative

The proposed action “will impact” GSG habitat. Livestock grazing can benefit or degrade GSG habitat on the allotment, depending on the timing, stocking rate, and habitat affected. Fall grazing may favor upland forb production, and spring grazing may be used to remove herbaceous cover and make forbs more accessible; (Smith, Malechek, & Fulgham, 1979), (Fulgham, Smith, & Malechek, 1982). Spring and early summer grazing may help control invasive weeds and remove woody plants, thereby decreasing the risk of wildfire that could remove large areas of habitat; (Mosley, 1996), (Olson & Wallander, 2001), (Merritt, Prosser, Sedivec, & Bangsund, 2001), (Riggs & Urness, 1989).

Excessive or poorly managed grazing causes degradation of sagebrush ecosystems and thus GSG habitat; (Bureau of Land Management, 2002). Inappropriate grazing management in uplands can reduce perennial grasses and forbs while favoring annual grasses and increasing sagebrush cover; (Branson, 1985), (Tisdale, 1994), (Beck & Mitchell, 2000), (Bork, West, & Walker, 1998)). This may impact GSG, because they rely on perennial grasses for escape cover and residual herbaceous cover for screening cover in nesting habitat. Forbs are positively associated with survival and recruitment of GSG chicks. Inappropriate grazing that damages meadows and riparian areas can harm GSG, because these areas are critical for GSG in late summer. Livestock may trample GSG nests or cause GSG to abandon their nests (Call, 1979), (Patterson, 1952).

Livestock grazing has occurred historically on these allotments and the BLM expects no additional impacts, other than those that have already taken place as a result of long-term use, from implementation of the proposed action. Continuing to manage for the Wyoming Standards for Rangeland Health will promote GSG habitat viability.

Livestock stocking rates in the BFO are designed to meet the 6 standards for healthy public rangelands; see Section 1.4.1. Particularly applicable to GSG is Standard 4, which requires that rangelands be capable of sustaining viable populations and a diversity of native plant and animal species. Continuing to manage for the Wyoming Standards for Rangeland Health will promote GSG habitat viability.

#### Alternative II-No Grazing Alternative

Under the no grazing alternative, no benefits to GSG habitat as a result of grazing management would occur. Excluding livestock does not necessarily cause an area to return to its pre-grazing ecological condition or guarantee improvements in species richness, diversity, or vegetative production; (Manier & Hobbs, 2007). Some habitats reach a threshold where livestock exclusion does not have an effect on the current trend; (Wambolt & Payne, 1986), (Sanders & Both, 1983). Other research suggests that rest from livestock grazing in Wyoming big sagebrush habitats may improve understory production while decreasing sagebrush cover (Wambolt & Payne, 1986). On Wyoming sites with dense big sagebrush and annual grass understory, eliminating grazing can increase fire risk which results in habitat degradation; (Peters & Bunting, 1994), (West, 1999).

#### **4.1.6.3 Big Game**

##### Alternative I-Proposed Action/No Action Alternative

By managing land to meet Rangeland Health Standards and improving overall rangeland condition, forage for deer, and pronghorn will improve.

Forage resources on winter ranges typically limit mule deer populations; (Clements & Young, 1997). Livestock grazing tends to favor shrubs over grasses, and thus may provide more desirable winter browse conditions on the allotments; (Austin & Urness, 1998), (Austin, Urness, & Riggs, 1986), (Smith A. D., 1949).

Livestock grazing may enhance big game forage by reducing unpalatable standing dead material; (Short & Knight, 2003). Big game and cattle may compete for forage on a minor level. There is very little dietary overlap between cattle, pronghorn, and deer during spring and early summer, since cattle feed primarily on grasses while pronghorn and deer select mostly forbs and some grasses. Cattle begin to use more forbs in late summer and fall, potentially increasing competition. Pronghorn and deer increase the amount of shrubs in their diet in fall and winter, thus reducing competition during those seasons; (Anderson & McCuiston, 2008).

The fences on the allotments pose a hazard to deer and pronghorn. In the BFO resource area, fences have caught and trapped deer and antelope. Modifying fence in areas used by cattle to a more wildlife “safe” design with height under 48 inches and the bottom wire 16 inches from the ground may reduce this hazard. Fences in this allotment are located primarily on private land and are not subject to BLM management.

Proper grazing management can improve winter forage conditions for big game; (Anderson & Scherzinger, 1975). Livestock grazing occurred historically on these allotments and the BLM expects no additional impacts from implementation of the proposed action.

#### Alternative II-No Grazing Alternative

Under the no grazing alternative, winter browse conditions for big game would not improve. Encroaching herbaceous species may ultimately out-compete shrub species, resulting in a reduction in quality of big game winter range; (Smith A. D., 1949). Additionally, livestock would not remove unpalatable standing dead material, resulting in unimproved forage.

#### **4.1.6.4 Raptors**

##### Alternative I-Proposed Action/No Action Alternative

Research results and monitoring studies suggest that livestock grazing is likely to impact some raptor species while favoring others; (Bock, Saab, Rich, & Dobkin, 1993). Grazing may cause the direct impacts of nest and egg destruction of ground-nesting species due to trampling by livestock, or nest abandonment by birds intolerant of disturbance. Grazing management practices can change vegetation composition, leading to the indirect impacts of changing prey composition and availability. Continued livestock grazing will favor those species that benefit from the alterations in habitat that occur in response to grazing; (Bock, Saab, Rich, & Dobkin, 1993).

Table 6 has grassland and shrub-steppe dependent raptor species not discussed elsewhere in this EA that Bock, et al. (1993), reported as positively or negatively impacted by livestock grazing.

**Table 6. Grassland and Shrub-Steppe Raptor Species Impacted by Livestock Grazing**

Response	Species	Habitat
Negative	Northern harrier	Grassland, Shrub-steppe
	Red-tailed hawk	Shrub-steppe
	Short-eared owl	Grassland, Shrub-steppe
	Swainson's hawk	Shrub-steppe
Positive	Golden eagle	Shrub-steppe

A recent study to assess the impacts of rotational cattle grazing on rodents and raptors suggests that raptor use and prey availability can be affected by livestock grazing. In comparisons between grazed and ungrazed areas, raptor use declined by 15% in the grazed area, but increased by 63% on the ungrazed area. Rodent abundance declined and remained lower in the grazed area for the duration of the study (Johnson & Horn, 2008).

Livestock grazing occurred historically on these allotments and the BLM expects no additional impacts, other than those that have already taken place as a result of long-term use, from implementation of the proposed action. Appropriate grazing management could maintain or improve nesting habitats for ground-nesting raptor species and improve prey abundance and availability by enhancing habitat conditions.

#### **Alternative II-No Grazing Alternative**

Under the no-grazing alternative, occasional trampling of nests by livestock would not occur. Livestock grazing would not alter habitats, thus benefitting some raptor species while negatively affecting others; (Bock, Saab, Rich, & Dobkin, 1993).

#### **4.1.7 Cultural, Historic Values, and National Register of Historic Places (NRHP)**

##### **Alternative I-Proposed Action/No Action Alternative**

Any activity that removes vegetation or leads to soil erosion can cause impacts to cultural resources. Livestock concentration areas (such as those that form near water sources, supplemental feeding areas, fence corners, etc.) and livestock trail formation may result in impacts to cultural resources. According to the State Protocol Agreement between the Wyoming BLM and the Wyoming State Historical Preservation Office (SHPO), grazing lease renewals that do not include seasonal grazing changes or changes in livestock types are exempt from case-by-case review. As per Appendix B item #27 and Section IV (A) (3) of the Wyoming State Protocol, on May 6, 2013 the Bureau electronically notified the SHPO of these grazing lease renewals.

#### Alternative II-No Grazing Alternative

The absence of grazing will not result in impacts to cultural resources.

#### **4.1.8 Socioeconomics**

##### Alternative I-Proposed Action/No Action Alternative

The proposed action would allow the grazing lessees to continue their ranch operations. They will be able to continue to contribute to the Wyoming Agriculture economy benefiting not only the state of Wyoming, but also Johnson County and various other local governments. The federal government would continue to collect grazing fees from the grazing lessees and this commodity use would continue to generate revenues for the Federal government to provide money for range betterment projects and revenue for the Wyoming state government.

##### Alternative II-No Grazing Alternative

The removal of grazing would increase the financial stress on both the grazing lessee and the adjacent land owners as the federal land would have to be fenced from private land to ensure no grazing occurs on federal land. The landowners rely on the public lands for their operation and with the removal of grazing the landowner would have to find other means to manage their operation either through sale of their livestock or renting much more expensive private lands.

#### **4.2 Cumulative Effects**

The CEQ regulations define cumulative effects as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions” (40 CFR 1508.7). It is anticipated that implementation of any of the alternatives in combination with the past, present, and reasonably foreseeable actions would not result in any measurable cumulative impacts.

##### Past, Present and Reasonably Foreseeable Actions

Past, present, and reasonably foreseeable actions in all cumulative effects affected areas (CEAA) that may contribute to cumulative effect to various resources present include livestock grazing, hunting, recreational activities, fire, oil/gas activities, and ROWs. It should be noted that result of the impacts of the past and present actions are described in Section 3, above. With respect past and present actions on GSG and habitat fragmentation, see Section 4.2.5 Candidate Species.

Livestock grazing occurred in the area for over 100 years. Approximately 514 AUMs are authorized annually between all the allotments. No changes to authorized AUMs, season of use, and kind/number of livestock are anticipated within the allotments. Livestock grazing will likely continue unless resources conditions or rangeland health warrants otherwise. Additional actions associate with livestock grazing include: off-high way vehicle (OHV) travel, feeding of mineral and protein supplements, and hauling and trailing livestock.

Hunting and recreational activities have occurred within the allotments for many years and still is a big part of the land uses within the area. These uses are expected to continue and no changes are expected in these land uses.

No recorded wildfires or prescribed burns occurred in the project area since 1990. There are no planned prescribed burns in the project area. Fire occurred in the area over many years. Fire

regime is the role fire would play across the landscape. The project area is in a Fire Regime Class II, in which the fire frequency is high severity (stand replacement of greater than 75% of the dominant over story vegetation being replaced). Fire Regime Condition Class (FRCC) determines how similar a landscape is to its natural or historical regime. The project area is in the FRCC of 2 which defines the area as having similar key ecosystem components including vegetation and disturbances such as fire. Wildfires are likely to occur in future.

The BLM permits federal fluid and solid mineral development in the PRB, including federal minerals below state or private (split estate) surface. The BLM prepares analysis prior to federal mineral development. In general, companies submit proposals in the form of PODs that may consist of 1 to 200 wells. Mineral development is common in the area and numerous PODs are present. Although permitting of oil and gas wells decreased from the past in the PRB it is likely this activity will continue, thus contributing to the cumulative impacts of the alternatives. Currently the Upper Grub Allotment is in the West Bear Draw POD operated by Lance and Lazurite POD operated by Yates Petroleum, and contains multiple wells. The West Timber Draw allotment lays within 2 approved PODs; Ursa Minor operated by Lance, and Imada operated by Lance. An analysis specific to each POD analyzes the environmental impacts from federal mineral development, and this EA incorporates those by reference using the aggregate effects analysis approach; see Table A.3. The remaining allotments do not lie within any mineral development.

ROWs approved in the allotments and likely will continue to be approved include: water pipelines, power lines, roads, and other federal ROWs. Maintenance and construction of these ROWs create surface disturbance that contribute to the cumulative impacts to various resources.

#### **4.2.1 Livestock Grazing**

##### **Geographic Scope and Timeframe**

The cumulative effects affected area (CEAA) for livestock grazing are the allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives is identified as the area in the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

##### **Incremental Effect from the Proposed Action**

With the addition of grazing to the past, present and reasonably foreseeable actions the incremental loss of forage available for livestock would occur. As long as mitigation and monitoring techniques are implemented to ensure new roads and trails from recreationalists and hunters are not made and fires are suppressed, the loss of vegetation available for livestock should be negligible. Additionally, oil/gas/ROWs will be permitted, thus decreasing the amount of forage available for grazing. But with best management practices (BMPs) being implemented, this should be negligible.

##### **Incremental Effect from the No Grazing Alternative**

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action will be less.

#### **4.2.2 Soils**

##### Geographic Scope and Timeframe

The cumulative effects affected area (CEAA) for soils are the grazing allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives has been identified as the area in the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

##### Incremental Effect from the Proposed Action

The proposed action when added to the reasonably foreseeable actions should be minimal as rangeland health objectives are used in livestock grazing management, hunters, and recreationalist will be monitored for land abuse, fire suppression will mitigate the severity of the impacts, and BMPs will be used for new oil, gas, and ROW activities. The incremental effects may include soil erosion and soil compaction along new trails made from livestock, roads, and trails used by hunting and recreationalist, new oil and gas roads, and areas where fires occur. Severity of these impacts would be dependent on the amount of hunter and recreationalist use on the allotments, number of oil/gas/ROWs permitted, and the intensity/size of the wildfires.

##### Incremental Effect from the No Grazing Alternative

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action will be less.

#### **4.2.3 Vegetation, Noxious Weeds and Invasive Plant Species**

##### Geographic Scope and Timeframe

The cumulative effects affected area (CEAA) for vegetation, noxious weeds, and invasive plants are the grazing allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives has been identified as the area within the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

##### Incremental Effect from the Proposed Action

The proposed action when added to the reasonably foreseeable actions should be minimal as Rangeland Health objectives are used in livestock grazing management, hunters and recreationalist will be monitored for land abuse, fire suppression will mitigate the severity of the impacts, and BMPs will be used for new oil, gas and ROW activities. The incremental effects may include forage loss and introduction of non-native species along new trails made from livestock, roads and trails used by hunting and recreationalist, new oil and gas roads, and areas where fires occur. Severity of these impacts would be dependent on the amount of hunter and recreationalist use on the allotments, number of oil/gas/ROWs permitted, and the intensity/size of the wildfires.

##### Incremental Effect from the No Grazing Alternative

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action will be less.



#### **4.2.4 Water Resources**

##### Geographic Scope and Timeframe

The cumulative effects affected area (CEAA) for water resources are the grazing allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives has been identified as the area in the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). Indirect and long term impacts may last longer.

##### Incremental Effect from the Proposed Action

The proposal in combination with any past, present, and reasonably foreseeable actions may increase the possibility for decreased water quality and quantity. This can be from loss of soil into the riparian areas. The incremental impacts should be minimal as rangeland health objectives are used in livestock grazing management, hunters and recreationalist will be monitored for land abuse, fire suppression will mitigate the severity of the impacts, and BMPs will be used for new oil, gas and ROW activities.

##### Incremental Effect from the No Grazing Alternative

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action will be less.

#### **4.2.5 Wildlife (Migratory Birds, Special Status Species, Threatened and Endangered Species, Small Mammals, Big Game, Raptors)**

##### Geographic Scope and Timeframe For Migratory Birds, Special Status Species, Threatened and Endangered Species, and Small Mammals

The cumulative effects affected area (CEAA) is the Crazy Women Creek watershed boundary. Many of the species within the watershed are contained within the watershed. Migratory species may travel outside the boundary but most of the life cycle likely occurs within the CEAA. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

##### Geographic Scope and Timeframe for Big Game and/or Raptors

The cumulative effects affected area (CEAA) for is the entire range the species may utilize in their life cycle within the vicinity of the allotments. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

##### Incremental Effect from the Proposed Action on Wildlife (Migratory Birds, Special Status Species, Threatened and Endangered Species, Small Mammals, Big Game, Raptors)

Incremental impacts from the proposed action when added to the past, present and reasonably foreseeable actions may result in disruption of species habitat through the loss of vegetation and habitat fragmentation. Loss of vegetation would occur from livestock grazing, new roads (recreation/hunting/oil and gas/ROWs), and wild fire. Habitat fragmentation would result from vertical intrusions associated with development and new roads associated with oil, gas, ROWs, and recreation activities. Additionally, the spread of noxious and invasive weeds from the actions may impact habitat quality by changing the native plant community, plant production, plant diversity, and ecological health. The incremental impacts should be minimal as rangeland health objectives are used in livestock grazing management, hunters, and recreationalist will be

monitored for land abuse, fire suppression will mitigate the severity of the impacts, and BMPs will be used for new oil, gas, and ROW activities

Incremental Effect from the No Grazing Alternative on Wildlife (Migratory Birds, Special Status Species, Threatened and Endangered Species, Small Mammals, Big Game, Raptors)

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action will be less.

**4.2.5 Candidate Species (Greater Sage-Grouse (GSG))**

Geographic Scope and Timeframe

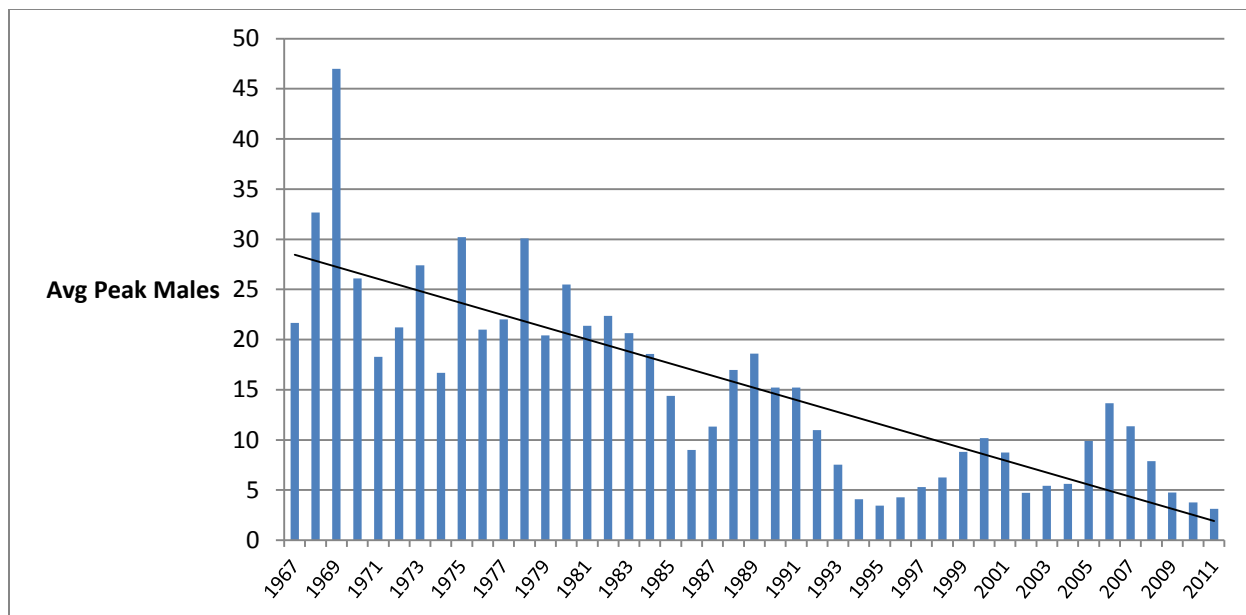
The cumulative effects affected area (CEAA) for candidate species GSG, is any area within a 4 mile radius of GSG leks within the allotments and leks that have a 4 mile buffer within any of the allotments. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

Incremental Effect from the Proposed Action

Incremental impacts from the proposed action when added to the past, present, and reasonably foreseeable action may result in habitat alteration of candidate species, specifically GSG. These impacts include loss of forage, cover, and habitat. The actions may also disturb mating and brood rearing that is vital to any special status species known to occur in the area. Loss of vegetation would occur from livestock grazing, new roads (recreation/hunting/oil and gas/ROWs), and wild fire. Habitat fragmentation would result from vertical intrusions associated with development and new roads associated with oil, gas, ROWs, and recreation activities.

The GSG population in northeast Wyoming is exhibiting a steady long term downward trend (U.S. Fish and Wildlife Service(USFWS), 2010), (Wyoming Game and Fish Department (WGFD) , 2011a). The figure below illustrates a ten-year cycle of periodic highs and lows. Each subsequent population peak is lower than the previous peak. Long-term harvest trends are similar to that of leks attendance (Wyoming Game and Fish Department(WGFD), 2011b). Habitat fragmentation (resulting from oil and gas development) and West Nile virus are the primary contributors to this decline (Taylor, Naugle, & Mills, 2012), (U.S. Fish and Wildlife Service (USFWS), 2010).

Additionally, the spread of noxious and invasive weeds from the actions may impact habitat quality by changing the native plant community, plant production, plant diversity, and ecological health. The incremental impacts should be minimal as rangeland health objectives are used in livestock grazing management, hunters and recreationalist will be monitored for land abuse, fire suppression will mitigate the severity of the impacts, and BMPs will be used for new oil, gas and ROW activities.



**Figure 1. Average peak number of male sage-grouse per active leks and trend line within the BFO 1967-2011**

#### Incremental Effect from the No Grazing Alternative

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action will be less.

#### **4.2.7 Cultural and Historic Values/Paleontology**

##### Geographic Scope and Timeframe

The cumulative effects affected area (CEAA) for cultural and historic values/paleontology are the grazing allotments' boundaries. The CEAA was selected because the scope of the proposed action and alternatives has been identified as the area within the allotments' boundaries. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

##### Incremental Effect from the Proposed Actions

Potential incremental impacts as a result of the proposed action in combination with the past, present and reasonably foreseeable actions may include disturbance to undocumented and document cultural resources. The incremental impacts should be minimal as rangeland health objectives are used in livestock grazing management, hunters and recreationalist will be monitored for land abuse, fire suppression will mitigate the severity of the impacts, and BMPs will be used for new oil, gas, and ROW activities.

##### Incremental Effect from the No Grazing Alternative

Less surface disturbance would occur with the removal of grazing. The incremental impacts when compared to the proposed action will be less.

#### 4.2.8 Socioeconomics

##### Geographic Scope and Timeframe

The cumulative effects affected area (CEAA) for socioeconomics is the Wyoming economy, and the BLM revenue from multiple use actions. The direct impacts are anticipated to last for the life of the grazing lease (10 years). While the indirect and long term impacts may last longer.

##### Incremental Effect from the Proposed Action

The most common incremental impact to socioeconomics would be the continued revenue generated from grazing receipts and other permitted actions and the positive impact it should have on the Wyoming economy.

##### Incremental Effect from the No Grazing Alternative

The loss of livestock grazing would reduce the income from permitted activities on BLM lands. This would negatively impact the Wyoming economy as management changes on private lands would change from the result of not livestock grazing on public lands. Livestock grazing and money generated from it is a large part of the Wyoming economy.

#### 4.4 Mitigation/Residual Impacts/Monitoring

Additional mitigation measures are not needed. All measures needed to mitigate the impacts of the proposed action are placed or incorporated as “design features” in the proposed action. The impacts of any mitigations measures are analyzed in chapter 4(Environmental Effects) of this document.

As per 40 CFR 1505.2(c), monitoring to ensure the proposed action and any design/mitigation features will occur. When time and priorities permit, this monitoring will follow BLM policy and management guidelines that may include supervisions and trend monitoring

#### 5.0 TRIBES, INDIVIDUALS, or AGENCIES CONSULTED

EK Ranch LLC.	BLM Grazing Lessee for the Poison Creek Allotment
Lester Limited Partnership	Base Property Owner for the Poison Creek Allotment
First Bank of Wyoming	BLM Grazing Lessee for the Steel Creek Allotment
Adami Ranch LLC. /Cat Creek Land LLC.	BLM Grazing Lessee for the West Timber Draw Allotment
Manuella F. Nicholas and Kay Rene Statfeld	Base Property Owner for the West Timber Draw Allotment
H & H Livestock	BLM Grazing Lessee for the Upper Grub Allotment
Fred A. Hepp Trust	Base Property Owner for the Upper Grub Allotment
Cato Soldier Creek Ranch	BLM Grazing Lessee for the Cotton and North Trabing Allotments
Dave Spencer	Wyoming Business Council - Northeast Regional Director
David Waterstreet	Wyoming DEQ Water Quality Division
Jerimiah Rieman	Wyoming Governor's Policy Office
Gwen Booth	Wyoming Game and Fish Department
Jim Logan	Wyoming Livestock Board
Judy Wolf	Wyoming State Historic Preservation Office
Lorraine Fresquez	Wyoming Office of State Land and Investments
Mark Conrad	Wyoming DEQ Water Quality Division
Michelle MacDonald	Wyoming Department of Agriculture
Mary Flanderka	Wyoming Game and Fish Department
Natalya Lenz	Wyoming State Historic Preservation Office

Renae Krakow	Wyoming Livestock Board
Richard Currit	Wyoming State Historic Preservation Office
Shawn Reese	Wyoming Governor's Policy Office
Susan Child	Wyoming Office of State Lands and Investments
Carol Bilbrough	Wyoming DEG Land Quality Division

## 6.0 LIST OF PREPARERS

Dustin Kavitz, Rangeland Management Specialist, Buffalo Field Office BLM

### 6.1 List of Reviewers

Name	Title	Duty	Name	Title	Duty
Kay Medders	Range Management	Range, Soils	Scott Jawors	Wildlife Biologist	Wildlife
Doug Tingwall	Archeologist	Cultural Resources	Charlotte Darling	Range Management	Vegetation, Soils
Chris Durham	Asst. Field Manager	Resources	John Kelley	Coordinator	NEPA Planning

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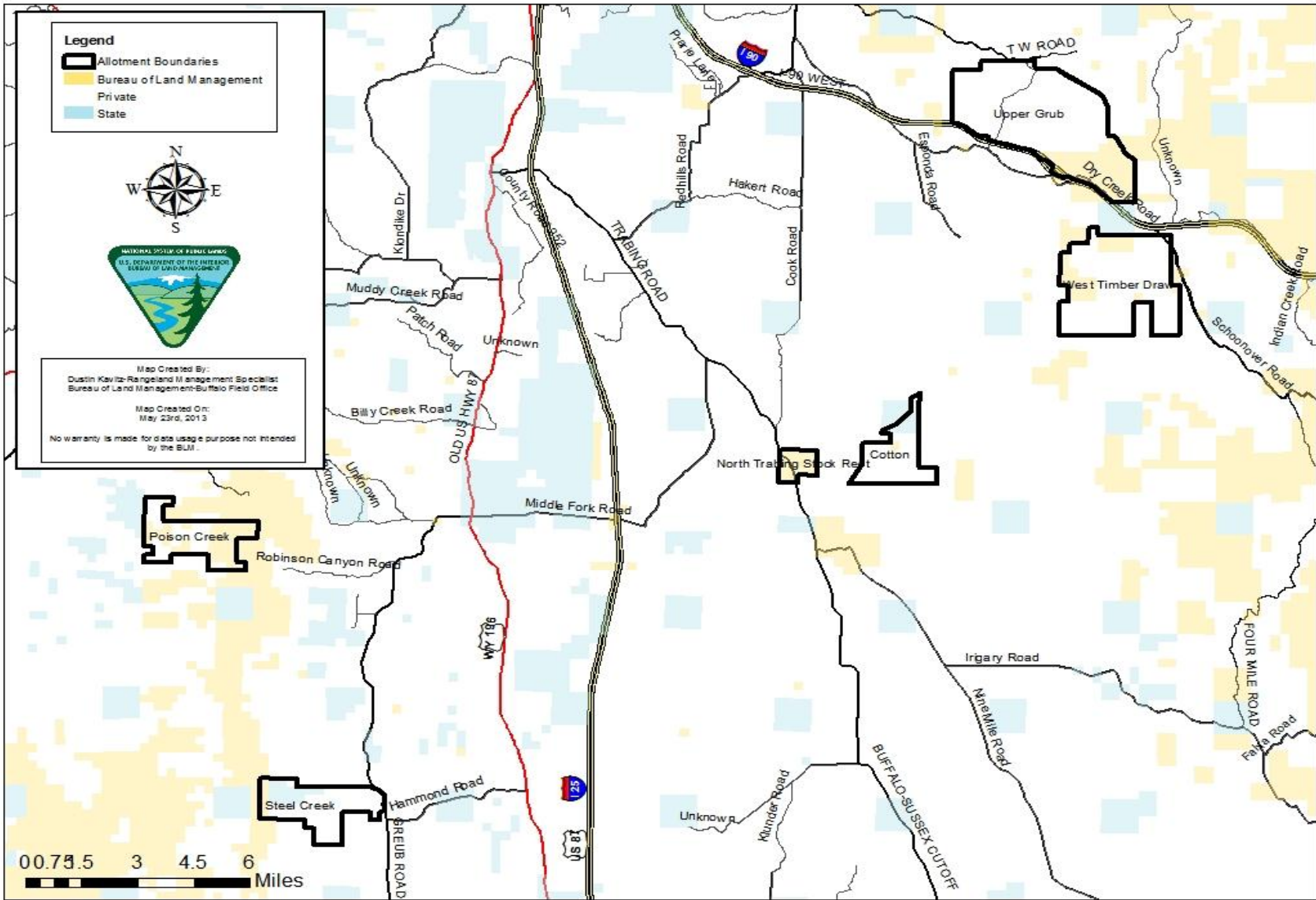
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## Attachment 1. General Orientation Map of the 6 Allotments





## Appendix A. Tables.

**Table A.1. Summary of Species Habitat and Project Effects.**

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
<b>Amphibians</b>				
Northern leopard frog ( <i>Rana pipiens</i> )	Beaver ponds, permanent water in plains and foothills (SS Policy). Swampy, marshes on the plains (WGFD CWCS).	NS	MIHH	Habitat may be present on private lands in the allotments. Individuals or eggs may be trampled.
Columbia Spotted frog ( <i>Rana pretiosa</i> )	Breeds in the shallows of lakes, ponds, marshes, and small streams (NatureServe).	NS	MIHH	Habitat may be present on private lands in the allotments. Individuals or eggs may be trampled.
<b>Birds</b>				
Baird's sparrow ( <i>Ammodramus bairdii</i> )	Grasslands, weedy fields (SS Policy). Un- or lightly grazed mixed-grass prairie, wet meadows, tallgrass prairie. Prairie w/ scattered low bushes and matted vegetation (NatureServe). Dry grassy slough bottoms, alkali flats, and depressions in low lying grasslands.	NS	NI	No preferred nesting habitat present.
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	Mature forest cover often within one mile of large water body (SS Policy). Nests near large lakes and rivers in forested habitat where adequate prey and old, large-diameter cottonwood or conifer trees are available for nesting (WGFD CWCS). Migrating and wintering eagles congregate near open water areas where concentrations of prey are available, such as carcasses of ungulate species, and spawning areas for kokanee, trout, and other fish (WGFD CWCS).	S	NI	Bald eagles may use the area for foraging. Activities associated with ongoing livestock grazing operations are not likely to occur to such an extent that foraging behavior will be disrupted.
Brewer's sparrow ( <i>Spizella breweri</i> )	Basin-prairie shrub (SS Policy). Closely associated with sagebrush shrublands that have abundant, scattered shrubs and short grass (WGFD CWCS).	S	MIHH	Trampling of nests may occur. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing adult to leave eggs or chicks unattended.
Burrowing owl ( <i>Athene cunicularia</i> )	Grasslands, basin-prairie shrub (SS Policy). Prairie, grassland, desert, and shrub-steppe habitats, and may inhabit agricultural areas. It depends on mammals that dig burrows, which it uses for nesting, roosting, and escape (WGFD CWCS).	S	MIHH	Black-tailed prairie dog colonies present. Grazing impacts to burrowing owls will be negligible.
Ferruginous hawk ( <i>Buteo regalis</i> )	Basin-prairie shrub, grasslands, rock outcrops (SS Policy). Semi-arid open country, grasslands, basin-prairie shrublands, and badlands (WGFD CWCS). Requires large tracts of relatively undisturbed rangeland and nests in rock outcrops, the ground, cutbanks, cliff ledges, or trees (WGFD CWCS).	S	MIHH	Ferruginous hawks may forage in this area. One nest has been documented within the allotments. There is a possibility of nest trampling and disturbance to nesting hawks from livestock herding or tending operations.
Loggerhead shrike ( <i>Lanius ludovicianus</i> )	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Grasslands interspersed with scattered trees and shrubs that provide nesting and perching sites.	S	MIHH	Ongoing livestock operations will not result in substantially reduced shrub cover or habitat fragmentation. Nests may be toppled by livestock.
Long-billed curlew ( <i>Numenius americanus</i> )	Grasslands, plains, foothills, wet meadows (SS Policy). Inhabits a variety of grassland types ranging from moist meadow grasslands to agricultural areas to dry prairie upland, usually near water. Prefers a complex of shortgrass prairies, agricultural fields, wet and dry meadows and prairies, and	NS	MIHH	Marginally suitable habitat may be present. Nests may be trampled.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
	grazed mixed-grass and scrub communities. Nests on the ground in habitat that includes grass <12", bare ground, shade, abundant invertebrate prey, and a minimum on 40 acres of suitable habitat (WGFD CWCS).			
Northern goshawk ( <i>Accipiter gentilis</i> )	Conifer and deciduous forests (SS Policy). Mixed coniferous habitat of a wide variety of ages, structural conditions, and successional stages. Nests in mature stands with multilayered canopies with open understory, small openings, and water within 0.25 miles. Nest stands often on slopes with northerly exposures or in drainages or canyon bottoms protected by such slopes. Post-fledging area are forest types that provide hiding cover and abundant prey. Foraging area may include a variety of forest types and structures but most often consists of forests with a high density of large trees, high canopy closure, high basal area, and relatively open understories, interspersed w/ shrublands and openings with perching trees to observe prey. Winter habitat probably includes a variety of vegetation types, such as forests, woodlands, shrublands, and forested riparian strips (WGFD CWCS).	NS	NI	Forested habitat sparsely scattered.
Peregrine falcon ( <i>Falco peregrinus</i> )	Cliffs (SS Policy). Forages in open woods and forests, shrub-steppe, grasslands, marshes, and riparian habitats. Nests in cliffs near habitats with abundant prey (WGFD CWCS).	NP	NI	Nest substrate not present. No known breeding pairs in proximity.
Sage sparrow ( <i>Amphispiza billneata</i> )	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Considered sagebrush obligate. Inhabits prairie and foothills shrublands habitat where sagebrush is present. Prefers shrublands with tall shrubs and low grass cover, where sagebrush is clumped in a patchy landscape. Requires a large block of un-fragmented habitat to successfully breed and survive (WGFD CWCS).	S	MIHH	Nests may be trampled. Cover will be affected.
Sage thrasher ( <i>Oreoscoptes montanus</i> )	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Considered sagebrush obligate. Inhabits prairie and foothills shrublands habitat where sagebrush is present. Prefers shrublands with tall shrubs and low grass cover, where sagebrush is clumped in a patchy landscape (WGFD CWCS).	S	MIHH	Nests may be trampled. Uncommon cowbird host, which are associated with cattle. May be more susceptible to higher parasitism pressure.
Trumpeter swan ( <i>Cygnus buccinator</i> )	Lakes, ponds, rivers (SS Policy). Inhabits shallow marshes, ponds, lakes, and river oxbows. Prefers stable, quiet, and shallow waters where small islands, muskrat houses, or dense emergent vegetation provide nesting and loafing sites. Nutrient-rich water, with dense aquatic plant and invertebrate growth, provide the most suitable habitat. Winter habitat must provide extensive beds of aquatic plants that remain ice-free.	NP	NI	Habitat not present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
	In Wyoming, cold temps and ice restrict trumpeters to sites where geothermal waters, springs, or outflow from dams maintain ice-free areas (WGFD CWCS).			
White-faced ibis ( <i>Plegadis chihi</i> )	Marshes, wet meadows (SS Policy). Inhabits marshes, wet-meadows, lakes, and irrigated meadows. Nests on the ground in rushes, cattails, or reeds; on a floating mat; or in a low tree.	NS	NI	Habitat may be present on private lands in the allotments. Ongoing livestock operations should not affect use of the area by Ibis.
Yellow-billed cuckoo ( <i>Coccyzus americanus</i> )	Open woodlands, streamside willow and alder groves (SS Policy). Nests primarily in large stands of cottonwood-riparian habitat below 7000 feet, including such habitats that occur in urban areas. It is a riparian obligate species that prefers extensive areas of dense thickets and mature deciduous forests near water, and requires low, dense, shrubby vegetation for nest sites.	NS	MIH	Suitable habitat may be present. Ongoing livestock operations should not create significant additional impacts. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing adult to leave eggs or chicks unattended.
Migratory bird species (Various)	Multiple vegetation types are used for breeding, foraging and wintering, with habitat types ranging from grasslands and shrub-steppe to woodlands and riparian areas.	K	MIH	Trampling of nests may occur. Negligible impacts from livestock or humans disrupting breeding, dislodging nests, or causing nest or fledgling abandonment. Livestock operations should not create significant impacts.
Plains Sharp-Tailed Grouse ( <i>Tympanuchus phasianellus jamesi</i> )	Short and mixed-grass prairie, sagebrush shrublands, woodland edges, and river canyons. Common where grasslands are intermixed with other shrublands, especially wooded draws, shrubby riparian area, and wet meadows. Diets include a variety of forbs, grasses and insects. In winter, sharp-tailed grouse also feed on buds and catkins of deciduous trees or shrubs and berries. Birds are also known to feed on the buds of aspen and willow.	S	MIH	Properly managed grazing will maintain quality cover and habitat. Nests or chicks may occasionally be trampled. There are two known leks located within 2 miles of the South Rosie Draw and Spring Creek #2 allotments. Ongoing livestock operations are not likely to change use of this area by Sharp-tailed grouse.
Mountain plover ( <i>Charadrius montanus</i> )	Short-grass prairie with slopes < 5% (SS Policy). Low, open habitats such as arid shortgrass and mixed-grass prairies dominated by blue grama and buffalo grass with clumps of cacti and forbs, & saltbush habitats of the shrub-steppe. Nests in large, flat grassland expanses with sparse, short vegetation (<=4") and bare ground. Adapted to areas disturbed by prairie dogs, heavy grazing, or fire (WGFD CWCS).	NS	NI	There is little to no suitable plover habitat present. If present, birds may prefer grazed areas.
<b>Fish</b>				
Yellowstone cutthroat trout ( <i>Oncorhynchus clarki bouvieri</i> )	Mountain streams and rivers in Tongue River drainage	NP	NI	Habitat not present.
<b>Mammals</b>				
Black-tailed prairie dog ( <i>Cynomys ludovicianus</i> )	Prairie habitats with deep, firm soils and slopes less than 10 degrees (SS Policy). Inhabits dry, flat, open, shortgrass and mixed-grass grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle. Constructs burrows in fine to medium soils (WGFD CWCS).	K	MIH	Prairie dogs often prefer habitats grazed by livestock. Prairie dog colonies are scattered throughout the allotments

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Fringed myotis ( <i>Myotis thysanodes</i> )	Conifer forests, woodland chaparral, caves and mines (SS Policy). Found in a wide range of habitats, including coniferous forests, woodlands, grasslands, and shrublands. Probably most common in xeric woodlands, such as juniper, ponderosa pine, and Douglas-fir. Typically forages over water, along forest edges, or within forests and woodlands. During summer, uses a variety of roosts, including rock crevices, tree cavities, caves, abandoned mines, and buildings. During winter, it hibernates in caves, abandoned mines, and buildings (WGFD CWCS). Must remain within commuting distance of drinking water. Roosts in rock crevices that typically face southeast or southwest and are in low elevation forests or woodlands (WGFD Bat Conservation Plan).	NS	NI	Scattered conifer woodlands present. Livestock will have negligible impacts to bats.
Long-eared myotis ( <i>Myotis evotis</i> )	Conifer and deciduous forest, caves and mines (SS Policy). Inhabits coniferous forest and woodland, including juniper, ponderosa pine, and spruce-fir. Forages over rivers, streams, and ponds within the forest-woodland environment. During summer, it roosts in a wide variety of structures, including cavities in snags, under loose bark, stumps, buildings, rock crevices, caves, and abandoned mines. During winter, it probably hibernates primarily in caves and abandoned mines (WGFD CWCS). Occasionally found in cottonwood riparian areas, basins, and sagebrush grasslands where roost sites are available (WGFD Bat Conservation Plan). Most likely found in areas close to a water source. May also occur more frequently in suitable habitat near rock outcroppings or cliffs. Primarily forages over rivers, streams, and ponds within the forest-woodland environment. Also forages over open areas such as campgrounds, small forest openings, and edges, although foraging areas are most likely to be close to a water source. Large-diameter conifer snags provide primary roosting habitat (WGFD Bat Conservation Plan).	NS	NI	Scattered conifer woodlands present. Livestock will have negligible impacts to bats
Spotted bat ( <i>Euderma maculatum</i> )	Cliffs over perennial water (SS Policy). Occupies a wide variety of habitats, from desert scrub to coniferous forest. Often observed in low deserts and basins and juniper woodlands. Roosts in cracks and crevices in high cliffs and canyons. Occasionally roost in buildings, caves, or abandoned mines, although cliffs are the only roosting habitat in which reproductive females use (WGFD CWCS). Associated with canyons, prominent rock features, and permanent water sources. In desert environments, it forages in canyons, in the open, or over riparian vegetation. All occurrences in WY were	NP	NI	Cliffs not present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
	close to a permanent waters (WGFD Bat Conservation Plan).			
Swift fox ( <i>Vulpes velox</i> )	Grasslands (SS Policy). Inhabits shortgrass and mixed-grass prairies. Often uses highway and railroad ROWs, agricultural areas, and sagebrush-grasslands. Closely associated w/ prairie dog colonies and uses underground dens year-round. Selects habitat with low-growing vegetation, relatively flat terrain, friable soils, and high den availability (WGFD CWCS).	NS	MIHH	Inappropriate grazing could reduce hiding cover and increase susceptibility to predation.
Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	Caves and mines (SS Policy). Occupies a variety of xeric to mesic habitats, including coniferous forests, juniper woodlands, deciduous forests, basins, and desert shrublands, and is absent only from the most extreme deserts and highest elevations. Requires caves or abandoned mines for roost sites during all seasons and stages of its life cycle, and its distribution is strongly correlated with the availability of these features (WGFD CWCS). May be limited to areas with reliable, accessible sources of drinking water. Forages along forest and woody edges, riparian corridors, and in open areas near wooded habitat. May avoid open, grazed pasture land.	S	NI	Availability of roost sites is unknown, but foraging habitat is present. Ongoing livestock grazing unlikely to affect prey abundance or availability of foraging habitat.
<b>Plants</b>				
Limber Pine ( <i>Pinus flexilis</i> )	High-elevation pine, often marking the tree line either on its own, or with Whitebark Pine ( <i>Pinus albicaulis</i> ), either of the Bristlecone pines, or Lodgepole Pine ( <i>Pinus contorta</i> ). Found in steeply-sloping, rocky and windswept terrain.	NP	NI	Habitat not present
Porter's sagebrush ( <i>Artemisia porteri</i> )	Sparsely vegetated badlands of ashy or tufaceous mudstone and clay slopes 5300-6500 ft.	NP	NI	Habitat not present
William's wafer parsnip ( <i>Cymopterus williamsii</i> )	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6000-8300 ft.	NP	NI	Habitat not present
<b>Presence</b> <b>K</b> - Known, documented observation within project area. <b>S</b> - Habitat suitable and species suspected, to occur within the project area. <b>NS</b> - Habitat suitable but species is not suspected to occur within the project area. <b>NP</b> - Habitat not present and species unlikely to occur within the project area.		<b>Project Effects</b> <b>NI</b> - No Impact. <b>MIHH</b> - May Impact Individuals or Habitat, but will not likely contribute to a trend towards federal listing or a loss of viability to the population or species. <b>WIPV</b> - Will Impact Individuals or Habitat - the action may contribute to a trend towards federal listing or cause a loss of viability to the population or species. <b>BI</b> - Beneficial Impact		

**Table A.2. Summary of Threatened and Endangered Species Habitat and Project Effects**

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
<b>Endangered</b>				
Black-footed ferret ( <i>Mustela nigripes</i> )	Black-tailed prairie dog colonies or complexes > 1,000 acres.	NP	NE	Black-footed ferrets have been “block-cleared” for Northeast Wyoming.
<b>Threatened</b>				
Ute ladies’-tresses orchid ( <i>Spiranthes diluvialis</i> )	Riparian areas with permanent water	NP	NE	Habitat not present
<b>Candidates for listing</b>				
Greater Sage-Grouse ( <i>Centrocercus urophasianus</i> )	Basin-prairie shrub, mountain-foothill shrub (SS Policy). Also includes wet-moist meadows, and alfalfa and irrigated meadows when adjacent to sagebrush (WGFD CWCS).	S	MIHH	There are four leks within four miles of BLM land in the EA area. Incubating female, eggs, and/or chicks may occasionally be trampled. Ongoing livestock operations are not likely to change current use of this area by nesting Greater Sage-Grouse.
<b>Presence</b> K - Known, documented observation within project area. S - Habitat suitable and species suspected, to occur within the project area. NS - Habitat suitable but species is not suspected to occur within the project area. NP - Habitat not present and species unlikely to occur in the project area.		<b>Project Effects</b> LAA - Likely to adversely affect NE - No Effect NLAA - May Affect, not likely to adversely affect individuals or habitat. NLJ – Not likely to jeopardize continued existence MIHH – May impact individuals and habitat NP—Habitat not present and species unlikely to occur within the project area.		

**Table A.3. This EA Incorporates by Reference the Following NEPA Analysis from the Analysis Area of the 6 Proposed Allotment Renewals.**

#	Operator / Project Name	NEPA Document #	Twp Rng	Allotment Analysis Area	Approval
1	Lance / West Bear Draw	WY-070-06-292	49N 79W	Upper Grub	2006
2	Yates / Lazurite	WY-070-EA09-095			2009 & 2011
3	Lance / Ursa Minor	WY-070-390CX3-308 to 330 excluding 314 & 316		West Timber Draw	2011
4	Lance / Imada	WY-070-05-355			2005